What is claimed is:

1. A liquid crystal display (LCD) device comprising:

a substrate;

a gate electrode over the substrate;

a semiconductor layer aligned with the gate electrode;

an insulation layer between the gate electrode and the semiconductor layer;

a source electrode and a drain electrode electrically connected with the semiconductor layer;

a color filter layer on and in direct contact with the source and the drain electrodes;

a planarization layer over the color filter layer and the source and the drain electrodes, the planarization layer having an opening exposing the drain electrode thereunder; and

a pixel electrode on the planarization layer and electrically connected with the drain electrode via the opening in the planarization layer.

2. The device of claim 1, wherein the color filter layer overlaps the source and drain electrodes enough to prevent light leakage.

3. The device of claim 1, wherein the color filter layer covers an end portion of at least the source electrode or the drain electrode.

4. The device of claim 1, wherin the semiconductor layer comprises:

a first layer on the insulation layer;

an etch stop layer on the first layer; and

a second layer over the first layer and the etch stop layer.

5. The device of claim 1, further comprising a light sheilding layer below the gate electrode.

6. A method of forming liquid crystal display (LCD) device, the method comprising:

foming a substrate;

forming a gate electrode over the substrate;

forming an insulation layer on the gate electrode and the substrate;

forming a semiconductor layer, aligned relative to the gate electrode, on the insulating layer;

forming a source electrode and a drain electrode electrically connected with the semiconductor layer;

forming a color filter layer on and in direct contact with the source and the drain electrodes;

forming a planarization layer over the color filter layer and the source and the drain electrodes, the planarization layer having an opening exposing the drain electrode thereunder; and

forming a pixel electrode on the planarization layer and electrically connected with the drain electrode via the opening in the planarization layer.

7. The method of claim 6, wherein the color filter layer is formed to overlap the source and drain electrodes enough to prevent light leakage.

8. The method of claim 6, wherein the color filter layer is formed to cover an end portion of at least the source electrode or the drain electrode.

9. The method of claim 6, wherein forming the semiconductor layer comprises:

forming a first layer on the insulation layer;

forming an etch stop layer on the first layer; and

forming a second layer over the first layer and the etch stop layer.

10. The method of claim 6, further comprising a step of forming a light sheilding layer below the gate electrode.

11. A liquid crystal display (LCD) device, comprising:

a thin film transistor (TFT) formed on a substrate, the TFT having a gate, a source and a drain;

a color filter layer formed on the TFT to be in direct contact with at least the source or the drain; and

a pixel electrode formed above the color filter layer to be in electrical contact with the drain.

12. The device of claim 11, wherein the color filter layer and at least the source or the drain are in direct contact such that there are no intermediaries therebetween.

13. A method of manufacturing a liquid crystal display (LCD) device, comprising:

forming a thin film transistor (TFT) on a substrate, the TFT having a gate, a source and a drain;

forming a color filter layer on the TFT to be in direct electrical contact with at least the source or the drain; and

forming a pixel electrode above the color filter layer to be in electrical contact with the drain.

14. The method accoridng to claim 13, wherein LCD is manufactured without forming a passivation layer between the TFT and the color filter layer.

15. A liquid crystal display device comprising:

a thin film transistor (TFT) formed on a substrate, including a gate electrode, a source electrode, and a drain electrode;

a color filter layer overlapping at least one of the source and drain electrodes;

a planarization layer formed on the TFT and on the color filter; and

a pixel electrode formed on the planarization layer and electrically contacting the drain electrode.

16. The liquid crystal display device of claim 15, wherein the TFT further includes:

a gate insulating layer on the substrate and covering the gate electrode; and

a semiconductor layer formed on the gate insulating layer, having an amorphous silicon layer and a doped amorphous silicon layer,

wherein the gate electrode is formed on the substrate, while the source and drian electrodes are spaced apart from one another and overlap end portions of the doepd amorphous silicon layer, respectively.

17. The liquid crystal display device of claim 16, wherein the TFT further includes an etch stopper formed on the doped amorphous silicon layer and between the source and drain electrodes.

18. The liquid crystal display device of claim 15, further comprising:

a light shielding layer formed between the substrate and the TFT; and

an insulating layer covering the light shielding layer.

19. The liquid crystal display device of claim 15, wherein the TFT further includes:

an active layer having source and drain regions at end portions thereof;

a gate insulating layer on a central portion of the active layer, the gate electrode being formed on the gate insulating layer; and

an inter layer insulator formed entirely over the substrate, having a first and a second contact hole which respectively expose a portion of the source and drain regions therebelow,

wherein the source and drain electrodes are formed on the inter layer insulator to respectively contact the source and drain regions.

20. The liquid crystal display device of claim 18, wherein the active layer is made of polysilicon.

21. A method of manufacturing a liquid crystal display device, the method comprising:

providing a substrate;

forming a gate electrode on the substrate;

depositing sequentially a gate insulating layer, a pure semiconductor layer and a doped semiconductor layer over the substrate;

etching the pure semiconductor layer and the doped semiconductor layer to form an active layer;

forming a source electrode and a drain electrode on the active layer;

forming a color filter, the color filter overlapping a portion of the source and drain electrodes;

etching a portion of the doped semiconductor layer between the source and drain electrodes to form a channel region of a resulting intermediate structure;

forming a planarization layer over the intermediate structure, the planarization layer including a drain contact hole to expose a portion of the drain electrode; and

forming a pixel electrode on the planarization layer, the pixel electrode electrically contacting the drain electrode via the drain contact hole.

22. A method of manufacturing a liquid crystal display device, the method comprising:

providing a substrate, the substrate including first and second regions;

forming a thin film transistor (TFT) on the first region of the substrate, the TFT having a gate electrode, an active layer, and source and drain electrodes;

forming a color filter on a second region of the substrate, the color filter overlapping at least portions of the source and drain electrodes;

forming a planarization layer on the TFT and the color filter, the planarization layer including a drain contact hole to expose a portion of the drain electrode; and

forming a pixel electrode on the planarization layer, the pixel electrode electrically contacting the drain electrode via the drain contact hole.

23. The method of claim 22, wherein forming the TFT includes:

forming a gate electrode;

forming a gate insulating layer, the gate insulating layer covering the gate electrode;

depositing a semiconductor layer on the gate insulating layer;

patterning the semiconductor layer to form an active layer;

forming an etch stopper layer on the active layer;

depositing a doped semiconductor layer, the doped semiconductor layer covering the semiconductor layer and the etch stopper layer;

forming source and drain electrodes on the doped semiconductor layer; and

etching a portion of the doped semiconductor layer between the source and drain electrodes.

24. The method of claim 22, further comprising:

forming a light shielding layer before forming the TFT; and

forming an insulating layer covering the light shielding layer.

25. The method of claim 23, wherein the active layer is made of amorphous silicon.

26. The method of claim 22, wherein forming the TFT includes:

forming a semiconductor layer;

forming a gate insulating layer, a width of the gate insulating layer being smaller than that of the semiconductor layer;

forming a gate electrode on the gate insulating layer;

ion-doping an exposed portion of the semiconductor layer to define source and drain regions;

forming an inter layer insulator entirely over the substrate, the inter layer including a source region contact hole to expose a portion of the source electrode therebelow, and a drain region contact hole to expose a portion of the drain electrode therebelow; and

forming source and drain electrodes to be in electrical contact with the source and drain regions, respectively.

27. The method of claim 26, wherein the pure semiconductor layer is made of polysilicon.